



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,934	08/11/2006	Kang-Ho Ahn	4684-037	8069
23429 7590 04/07/2008 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER				
DOLE, TIMOTHY J				
ART UNIT		PAPER NUMBER		
2831				
MAIL DATE		DELIVERY MODE		
04/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,934

Applicant(s)

AHN, KANG-HO

Examiner

TIMOTHY J. DOLE

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6 and 7 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 6 and 7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 03 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Liu (US 6,639,671).

Referring to claim 1, Liu discloses an apparatus for measuring a number of particles (abstract) comprising: a particle charging means (fig. 6 (188)) for charging particles to a monopolarity (column 10, lines 37-41); an inner guide duct (fig. 6 (186)) into which clean air is introduced (column 10, lines 13-18 and column 1, lines 9-11); an electrode (fig. 6 (182)) to which a high voltage is applied (column 10, line 66 – column 11, line 1), the electrode being installed in the inner guide duct in a lengthwise direction of the inner guide duct (fig. 6); a power supplying means (fig. 6 (234)) for supplying power to the electrode (column 10, line 66 – column 11, line 1); an outer guide duct (fig. 6 (184)) positioned outside the inner guide duct (fig. 6) and being longer than the inner guide duct (fig. 6), the particles charged by the particle charging means being introduced between the inner guide duct and the outer guide duct (column 9, line 63 – column 10, line 2); a particle separating means (fig. 6 (220), (222) and (224)) having an upper end positioned at an inner lower side of the outer guide duct (fig. 6) and including a plurality

of particle separating ducts (fig. 6 (224) and column 10, lines 32-34) that are spaced apart from a lower end of the electrode (fig. 6), the particle separating means separating the charged particles according to size (column 10, lines 44-65); and a particle counting means (fig. 6 (Counter)) connected to the particle separating means (fig. 6), the particle counting means counting the particles separated according to size by the particle separating means (column 11, lines 1-6).

Referring to claim 6, Liu discloses a method for measuring a number of particles (abstract) comprising steps of: charging particles to be measured to a monopolarity (column 10, lines 37-41); introducing the charged particles and clean air into a guide duct (column 9, line 63 – column 10, line 2, column 10, lines 13-18 and column 1, lines 9-11); applying a voltage to an electrode installed in the guide duct (column 10, line 66 – column 11, line 1); attaching the charged particles of a certain size or less to the electrode (column 10, lines 48-51); separating the charged particles, which are not attached to the electrode, according to size (column 10, lines 44-65); and measuring the number of charged particles separated according to size (column 11, lines 1-6).

Referring to claim 7, Liu discloses the method as claimed wherein the size of the charged particles attached to the electrode is controlled by changing the voltage applied to the electrode (column 10, line 66 – column 11, line 6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (shown above).

Referring to claim 2, Liu discloses the apparatus as claimed except wherein the particle counting means includes a plurality of particle counters connected to the respective particle separating ducts.

MPEP 2144.04 (VI) (B) discloses that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. Providing a plurality of counters connected to the respective particle separating ducts of Liu would simply provide a count for another set of particles. Since there is no unexpected result, the claims are not patentably distinct from Liu.

It would have been obvious to one skilled in the art at the time of the invention to incorporate a plurality of counters into the apparatus of Liu for the purpose of providing a more precise particle size distribution.

Referring to claim 3, Liu discloses the apparatus as claimed wherein the particle separating ducts are concentrically installed (fig. 6 (224)).

Response to Arguments

5. Applicant's arguments filed January 3, 2008 have been fully considered but they are not persuasive.

6. In response to Applicant's argument with respect to claim 1, that "Nowhere does Liu disclose, teach or suggest particle separator ducts, as recited" (page 5, line 24), the Examiner respectfully disagrees. Liu discloses particle separating means 220 and 224, which separate particles of a preferred size from larger particles (column 10, lines 51-56 and 61-65) and include a plurality of particle separating ducts 224 (column 10, lines 32-34), which are spaced apart from a lower end of the electrode 182, as claimed. Since Liu discloses all the limitations of claim 1, along with their proper positioning, as shown in the rejection above, the claim is not patentably distinguishable over Liu.

7. In response to Applicant's arguments with respect to claim 6, that "nowhere does Liu disclose separating charge particles not attached to the electrode and counting these particles in groups" (page 7, lines 12-13), it is noted that the features upon which Applicant relies are not recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Nowhere does claim 6 require counting particles in groups. Claim 6 simply requires, inter alia, "separating the charged particles, which are not attached to the electrode according to size", which Liu discloses by showing that charged particles of a preferred size are deflected into slot 220 and larger particles flow into holes 224 (column 10, lines 44-65); and "measuring the number of charged particles separated according to size", which Liu discloses by showing that the charged particles, which are separated from the larger particles (column 10, lines 44-65), are counted (column 11, lines 1-5). Since Liu discloses all the limitations of claim 6, as shown in the rejection above, the claim is not patentably distinguishable over Liu.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY J. DOLE whose telephone number is (571)272-2229. The examiner can normally be reached on Mon. thru Fri. from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J. Dole/
Primary Examiner, Art Unit 2831